



Natural Heritage & Endangered Species Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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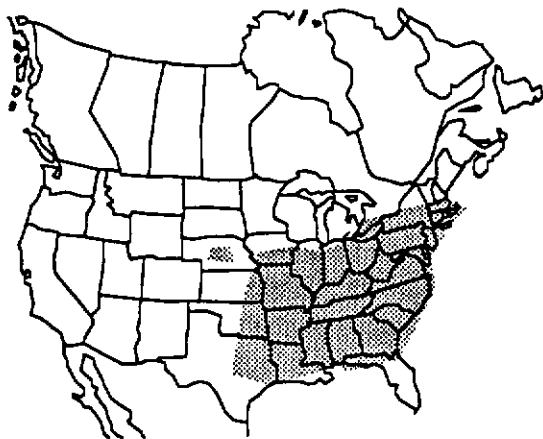
ENDANGERED SPECIES OF MASSACHUSETTS

WINGED MONKEY-FLOWER (*Mimulus alatus* Ait.)

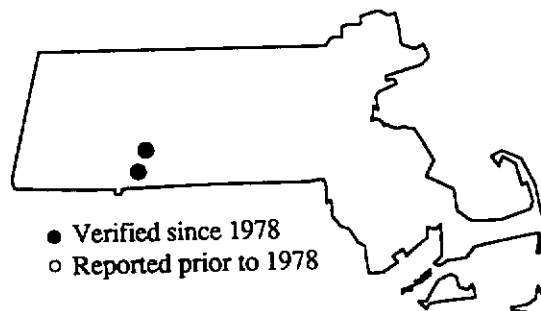
Description: Winged monkey-flower, a member of the Figwort family (*Scrophulariaceae*), is an erect, up to 1 m (3 1/4 ft.) high, herbaceous perennial with pale lavender-blue flowers. Its opposite toothed leaves are elliptical, lanceolate, or ovate in shape and taper to winged petioles. The hairless stem is square in cross-section and has weakly developed wings (thin, membranous extensions). Winged monkey-flower's green calyx (outermost floral whorl) is tubular and angled, with triangular lobes ending in bristle-like tips. The 2.5 - 3.5 cm (1 - 1 2/5 in.) long corolla is two-lipped, varies from violet-blue to pink, and has a yellow-shaded throat. (Occasionally, flowers may also be white.) The peduncles, or flower stalks, are very short, making the flowers appear almost sessile (stalkless). Flowering season extends from late July to mid August. Winged monkey-flower's many minute seeds are contained in a 1 cm (2/5 in.) long, ovate-oblong capsule (a type of dry fruit that opens to discharge its seeds).



Gleason, H. A. The New Britton and Brown Illustrated Flora of The Northeastern U.S. and Adjacent Canada. NY Botanical Garden, 1952.



Documented Range of Winged
Monkey-flower



Massachusetts Distribution by Town

Range: The range of winged monkey-flower has been documented as occurring from Massachusetts to southern Ontario and southern Michigan south to Florida and Texas. A disjunct population occurs in Nebraska.

Similar Species in Massachusetts: Winged monkey-flower resembles the common monkey flower (*M. ringens*). However, common monkey flower has sessile leaves, with leaf margins that are less sharply toothed. Furthermore, the flower stalks of *M. ringens* are about as long as the flower, while those of winged monkey-flower are very short.

Habitat in Massachusetts: *M. alatus* grows in floodplain forests on the banks of streams tributary to a major river. These forest habitats are flooded each spring for days or even weeks at a time. Associated species include silver maple (*Acer saccharinum*), green ash (*Fraxinus pennsylvanica*), pin oak (*Quercus palustris*), monkey flower (*M. ringens*), bog hemp (*Boehmeria cylindrica*), and sensitive fern (*Onoclea sensibilis*). All four current stations (discovered or relocated since 1978) are found on tributaries of the Connecticut River.

Population Status in Massachusetts: Winged monkey-flower is presently listed as "Endangered" in Massachusetts. All species listed under the Massachusetts Endangered Species Act are protected from take (collecting, picking, killing, moving...). It has four current stations (discovered or relocated since 1978) in two towns in the Commonwealth. Winged monkey-flower was rediscovered in Massachusetts in 1978, after not being recorded here for over 90 years. There are also two questionable (uncertain identification of the species) historical stations (unverified since 1978). Populations of all current stations are small and vulnerable to loss, especially if the annual flooding of their habitats were to be reduced. Limitation of habitat is the major factor in the plant's rarity in Massachusetts, although climatic and other factors may also be involved. Winged monkey-flower is also considered to be rare in New York, New Jersey, Iowa, Delaware, and Nebraska and Ontario. It was present historically in Michigan.

Management Recommendations: As with most rare species, little is known about Winged monkey flower's exact habitat needs. The following comments are based primarily on observations of the various populations in Massachusetts. Winged monkey-flower is a floodplain species dependent on annual flooding for its survival. In order to maintain the existing populations and prevent its extirpation from Massachusetts, it is critical that its habitat remain intact and protected against any change of water regimes. Since the species occurs near the mouths of tributary streams and large rivers, the flooding regime of the major river affects that of the smaller stream, and alterations of the flow of the major river may have a strong effect on the smaller stream: the flows of both streams need to be maintained. As with all herbaceous plants, exotic species can cause problems if they become established near Winged monkey flower. All of the current populations of Winged monkey flower grow below a forest canopy: it is likely that it is a species that requires filtered light, rather than full sun, and the nearby trees ought to be left. Grazing has been a problem at one site, removal of the grazers in such cases ought to solve that problem. Other possible changes to the habitat that could cause problems include erosion and siltation.

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